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EXAMINER	
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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/740,524
Filing Date: December 19, 2000
Appellant(s): HALL ET AL.

Katherine DeVries Smith
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 1/12/2006 appealing from the Office action mailed 6/30/2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,525,854 B1	TAKEHASHI et al	02-2003
5,247,380 A	LEE et al	09-1993

3M Headset Intercom System Model C960'' operating instructions. 351 Food Services Trade Department, publ. 78-6912-0671 - 4 Rev. F, May 1999. pages i-iv,1-29.

(9) Grounds of Rejection

1. The following ground(s) of rejection are applicable to the appealed claims:

2. **Claims 23-25, 27-30, 32, 35, and 37-40** are rejected under 35 U.S.C. 103(a) as being unpatentable over "3M Headset Intercom System Model C960 Operating Instructions" in view of Ruppert et al (USPN 6236969). Hereafter, "3M Headset Intercom System Model C960 Operating Instructions" will be referred to as "3M" and "Ruppert et al" will be referred to as "Ruppert".

3M discloses a headset communication system for a dual lane food service environment, wherein in one mode of operation a user is able to communicate with two different service lanes from a single headset.

Specifically regarding Claim 23, 3M specifies:

A system of programmable headsets ("one base station and one or more headsets", page 1, lines 15-16) comprising:

(a) a plurality of programmable headsets ("one or more headsets", page 1, lines 15-16),

wherein each headset (page 2, "Headset") comprises:

(i) a headband (band connected to and adjusted by 15, left figure, Figure 5, page 5, lines 20-24); and

(ii) an electronics housing (left figure, Figure 5, casing for circuitry and connectors 1-11) including:

(3) a transmitter ("2-way", page iii, line 3; inherent in "transceiver" of "transceiver housing", page 11, line 7) operably connected to the headset signal processing device (e.g., "microprocessor", page 23, lines 2-3, in further view of Ruppert discussed below);

(4) a receiver ("2-way", page iii, line 3; inherent in "transceiver" of "transceiver housing", page 11, line 7) operably connected to the headset signal processing device (e.g., "microprocessor", page 23, lines 2-3, in further view of Ruppert discussed below);

(b) a programming unit ("base station," with Channel Select Button", page 22) comprising

(i) a programming unit signal processing device with an output (circuitry in base station converts a depressed Channel Select switch into a "new channel selection" to be 'read' into microprocessor and changes indicator; "output" is signal applied through base station programming jack after new channel selected and read into microprocessor of base station; pages 22-23); and

(iii) wherein the programming unit signal processing device (circuitry of base station, comprising at least interconnection of Channel Select Button, microprocessor, Reset Switch, Programming Jack,

and indicators) is configured to output a signal (via Base Programming Jack) containing the operation frequency ("channel") for the transmitter and the receiver (programming comprises changing channels or radio frequencies, pages iii, lines 2-4; page 1, lines 3-5; page 22, lines 1-3; headset is programmed to same channel as base station, page 23, line 13; new channel selection is first determined in base station, page 23, lines 1-2; programming cable connection and turning headset ON then result in headset being "now programmed" to same channel as base station, causing audible tones, page 23, lines 6-14; connection of cable after selection of channel and reading new channel into microprocessor of base station implies signal is transmitted from base station to headset via the cable; as this connection/signal results in the headset being "now programmed to the same channel as the base station", implicit is that the cable conducts information regarding the new channel selection to the headset; also considered in view of Ruppert, as discussed below, which denotes the passing of an electrical signal to control circuitry, which includes RF tuning control capabilities, col. 10, lines 16-26)

However, 3m does not specify:

a headset infrared light detector arranged to receive infrared light signals, convert the infrared light signals into electric signals and supply the electric signals to an output, the headset infrared light detector being located in a detector portion of the electronics housing;

a headset signal processing device with an input coupled to the output of the headset infrared light detector for processing the electric signals supplied by the headset infrared light detector;

a programming unit infrared light emitter operably connected to the output of the programming unit signal processing device

wherein the programming unit signal processing device is configured to output a signal to the programming unit infrared light emitter to the headset infrared light detector

Ruppert teaches a communication system comprising a headset and a base station with a variety of features, one of which is means to transmit and receive information via both infrared and radio frequency signals. The IR communication interfaces are intended for data transfer between the headset and the base station as well as other devices (col. 6, lines 63-66 and col. 7 lines 13-21). Control signals input through the headset (10) are disclosed as being able to alter the tuning of the RF circuitry as well as effect data transmission over the I/R interface (col. 10, lines 23-32).

Specifically regarding Claim 1, Ruppert discloses:

a headband (12)(col. 3, lines 56-60); and

an electronics housing (14,16)(col. 3, lines 58-65) including:

a headset infrared light detector (89) arranged to receive infrared light signals (from 88), convert the infrared light signals into electric signals (inherent for use of infrared signal by standard integrated circuit board implementation of electronics components(30

or 32) (col. 4, lines 60-65)) and supply the electric signals to an output (into 32 or to 97)(col. 7, lines 2-4 and 61-64),

the headset infrared light detector (89) being located in a detector portion (located on the underside of mouthpiece (16) or variety of locations on headset (col. 7, lines 1-12));

a headset signal processing device (32 or combination of 32 and 97) with an input coupled to the output of the headset infrared light detector (89) for processing the electric signals supplied by the headset infrared light detector(89)(col. 7, lines 2-4; col. 10, lines 56-58);

(3) a transmitter (integrated into 30) operably connected to the headset signal processing device(32)(col. 7, lines 23-30);

(4) a receiver (integrated into 30) operably connected to the headset signal processing device (32)(col. 7, lines 23-30);

(ii) a programming unit infrared light emitter (88) operably connected to the output of the programming unit signal processing device (circuitry that apples data from serial cable 86 to IR interface, col. 6, lines 60-66, in view of circuitry interconnecting at least Channel Select Switch, microprocessor, and Base Programming Jack of 3M)(col. 6, lines 64-66; Figure 3, both of Ruppert)

(iii) wherein the programming unit signal processing device (circuitry interconnecting 86 and 88) is configured to output a signal to the programming unit infrared light emitter (88, in view of programming jack of 3M) (col. 6, lines 63-64)… for transmission by the

programming unit infrared light emitter (88 in 70) to the headset infrared light detector (89)(col. 7, lines 2-4)

To one of ordinary skill in the art at the time the invention was made, it would have been obvious to include the IR communication interface of Ruppert into the headset of the applicant's admitted prior art. The motivation behind such a modification would have been that such a port would have enabled additional, frequency independent wireless communication to be conducted through the headset along with the radio communications of the system. Such a port would have been particularly useful for two way data transfer between the radio-communications enabled headset and base station of 3M and devices such as a computer, printer, ATM, or other peripheral device. Ruppert also notes an IR transmission scheme that would have enabled secure transmissions to be made. Ruppert also teaches that a single base station may issue broadcast communications over the I/R band, which suggests that implementing such I/R interface on the base unit and headsets of 3M would have enabled multiple headsets to access transmitted data.

Regarding **Claim 24**, 3m in view of Ruppert discloses:

(a) wherein the electronics housing (comprising 14,16 of Ruppert) of the headset further comprises a headset infrared light emitter (part of 89) operably connected to an output of the headset signal processing unit (comprising at least 32) (part of 89 in view of the IR ports (88,89) enabling full duplex communication between the headset (10) and other data transmission devices, along with the

communications between the headset (10) and base unit (70); col. 7, lines 16-21 and col. 10, lines 26-34 and 54-59, all of Ruppert)

(b) wherein the programming unit further comprises a programming unit infrared light detector (part of 88 of Ruppert) arranged to receive infrared light signals (duplex communication, col. 7, lines 16-18; col. 10, lines 29-32), convert the received infrared light signals into electric signals (implicit, as data is sent through serial interface 86) and supply the electric signals to an input of the programming unit signal processing device (computer of Ruppert in view of microprocessor and interconnecting circuitry of 3M)(full duplex communication between the headset (10) and computer which may be connected to base unit (70); col. 7, lines 16-21 and col. 10, lines 26-34 and 54-59, all of Ruppert)

Regarding **Claim 25**, Ruppert discloses that multiple IR ports in various locations may be provided on the device, and the port depicted (88) is located on the bottom of the mouthpiece (16) towards the speaker end of the electronics housing (14) (col. 7, lines 8-11). These teachings read on "the detector portion of the electronics housing is located at an end of the electronics housing".

Regarding **Claim 27**, the mouthpiece (16) of Ruppert's invention includes a microphone (18) and a speaker (20), which reads on "the headband includes a speaker and a microphone" (col. 4, lines 10-12). Ruppert also discloses that electrical connections (28,29,50,60) exist between the electronics housing and such components contained on the headband (col. 4, lines 40-44; col. 5, lines 21-37). These physical

contacts and the physical, electricity-conducting paths to which they correspond, such as illustrated for (28), read on "the headband is operably connected coupled to the electronics housing by a wire connection".

Regarding **Claim 28**, the mouthpiece (16) of the component enclosing portion (14,16) of Ruppert's invention includes a microphone (18) and a speaker (20) and is connected through another electronics housing (14) to the headband (12), which reads on "the electronics housing is attached to the headband" and "includes a speaker and a microphone" (col. 4, lines 10-22 and Figure 1). The electronics housing of 3M is also connected to the headset (Figure 5, page 4).

Regarding **Claim 29**, the system of 3M includes circuitry for receiving channel selection inputs, reading the new selected channel into a microprocessor, and transmitting a signal through a programming cable jack in one housing. The system of Ruppert, however, involves a separate data generating and processing device, a computer, and transmitting component, base unit (70). Ruppert discloses that serial data is passed through the base unit (70) by the infrared port (88), wherein the serial data is obtained through a serial data port (86) from a data source such as a computer (col. 6, lines 60-63). In view of the processing performed in the system of 3M, the computer or devices externally connected through the telephone jack in the system of Ruppert reads on ""further comprising a base unit connected to the programming unit" (col. 10, lines 29-32). Computers and conventional telephone devices are substantially well known in the art to include

physical input consoles or controls, such as keyboards or keypads, which reads on "the base unit comprising a control panel".

Regarding **Claim 30**, the base unit (70) of Ruppert includes volume control switches (76,77), as does the base station of 3M among other controls, which reads on "the programming unit further comprises a control panel" (col. 6, lines 20-22 of Ruppert; pages 22-23 and Figure 21-23 of 3M).

Regarding **Claim 32**, 3M in view of Ruppert teaches:

A method of programming a headset comprising (page 23 of 3M):

positioning a detector portion (14, 16 of Ruppert with mounted 89 thereon) of a headset (10)(headset of 3M in view of 10 of Ruppert) near a programming station (base station of 3M in view of base unit 70 of Ruppert)(Figure 22 of 3M, and col. 10, lines 26-39, at least "near" by virtue of 89 on 10 and 10 used with 70 in office),

where the headset (10) comprises a headset infrared light detector (89) for receiving signals from a programming station infrared light emitter (88)(col. 6, lines 60-67; col. 7, lines 1-4 of Ruppert),

wherein the headset includes a transmitter and receiver (col. 7, lines 22-30 of Ruppert);

transmitting an infrared light signal from the programming station infrared light emitter (88 on base unit 70 of Ruppert in view of base programming jack on base station of 3M) to the headset infrared detector (89 on headset of Ruppert in view of programming

jack on headset of 3M, Figure 23)(col. 6, lines 63-66 of Ruppert; page 23 of 3M),

where the signal contains information regarding the operating frequency for the transmitter and receiver of the headset (after establishing new channel selection in base station of 3M, the selection is 'read' into microprocessor of base station of 3M, and then programming cable is connected to headset to program new channel to headset, pages 22-23 of 3M; as new channel selection can be represented in electronic form by virtue of 'readable' into microprocessor, and programming of headset occurs after connection of programming cable, implicit is the sending of signal from base station to headset, wherein signal includes information regarding new channel selection; this signal is considered in view of data transfer in system of Ruppert, as cited above)

setting the operating frequency of the transmitter and receiver of the headset in response to the signal (function of cable connection resulting in "headset is now programmed to the same channel as base station", page 23 of 3M; in further view of use of electronic signal in Ruppert used to tune RF frequency, col. 10, lines 16-26).

Regarding **Claim 35** please refer above to the components cited in the rejection of the similar limitations of Claims 23 and 32, particularly the rejection of set (a) limitations of Claim 23 and the "setting" limitation of Claim 32.

Regarding **Claim 37**, please refer above to the grounds of rejection cited in relation to the similar limitations of Claim 25.

Regarding **Claim 38**, please refer above to the grounds of rejection cited in relation to the similar limitations of part(c) of Claim 26.

Regarding **Claim 39**, please refer above to the grounds of rejection cited in relation to the similar limitations of Claim 27.

Regarding **Claim 40**, please refer above to the grounds of rejection cited in relation to the similar limitations of Claim 28.

3. **Claims 26** is rejected under 35 U.S.C. 103(a) as being unpatentable over 3M in view of Ruppert as applied above, and further in view of Takahashi et al (USPN 6525854). Hereafter, "Takahashi et al" will be referred to as "Takahashi".

As detailed above, 3M discloses a headset communication system for a dual lane food service environment, wherein in one mode of operation a user is able to communicate with two lanes from a single headset. Ruppert discloses a communication system comprising a headset and a base station, along with the means to transmit and receive information via both infrared and radio frequency signals. Specifically regarding Claim 26, Figure 3 of Ruppert illustrates the base unit (70), which includes a support recess (81) that reads on "a cradle for receiving the detector portion of the headset" (col. 6, lines 27-41). This base unit (70) includes a serial interface jack (86), through which an attached computer may provide and receive serial data (col. 6, lines 60-63). 3M discloses the programming of

the headset through the use of a base station and programming cable (page 3; page 22, Figure 22). The combination of a base unit (70) and a computer of Ruppert in two units for transmitting, in view of the particular programming functions and signal output included in the base station of the system of 3M, as noted above in regards to Claim 23, collectively reads on "a programming unit". The IR interface ports (88,89) of Ruppert are illustrated as defined panels on the headset (10) and base (70) of Ruppert, the construction of such a well-known, infrared-passing component reading on "the detector portion of the headset and the cradle include at least a window of infrared transparent material" (Figures 1 and 3 of Ruppert).

As can be seen in Figure 3 of Ruppert, the IR port (88) of the base station (70) is located within the support recess (81). Ruppert also discloses that the IR ports of the headset may numerously and variously be positioned (col. 7, lines 8-11).

However, 3M in view of Ruppert does not clearly specify:

- that the infrared light emitter is positioned for infrared light communication with the headset light detector when the detector portion is positioned in the cradle

Takahashi teaches a portable radio communication device with an infrared communication function that enables wireless data transmission.

Specifically regarding **Claim 26**, Takahashi discloses:

infrared light emitter (21B) positioned for infrared light communication with the headset light detector (10A) when the detector portion is positioned in the cradle (col. 7, lines 9-10; col. 8, lines 16-17 and 40-52; col. 9, lines 41-48)

To one of ordinary skill in the art at the time the invention was made, it would have been obvious to align the IR ports in the headset and cradle of 3M in view of Ruppert in a manner that would have enabled IR communication while the headset is positioned in the cradle, as is disclosed by Takahashi. The motivation behind such a modification would have been that such an arrangement would have enabled IR communication to take place between the cradle and headset when operating conditions for the headset allow the headset to be placed in the cradle. Such operating conditions would have included charging of the battery, as suggested by Ruppert, hands-free operation of the radio telephone, as suggested and enabled by Takahashi, or while the headset is being stored or otherwise not in use, as would have been recognized by one of ordinary skill in the art.

4. **Claim 31** is rejected under 35 U.S.C. 103 (a) as being unpatentable over 3M in view of Ruppert and Takahashi as applied above, and in further view of well known prior art.

As detailed above, 3M discloses a headset communication system for a dual lane food service environment, wherein in one mode of operation a user is able to communicate with two lanes from a single headset. Ruppert discloses a communication system comprising a

headset and a base station, along with the means to transmit and receive information via both infrared and radio frequency signals. Takahashi discloses a radio telecommunications device with included infrared communications components for data transfer.

3M in view of Ruppert and Takahashi does not disclose:

- that the base unit, or programming unit, is wall mountable

However, the Examiner takes Official Notice that the concept of mounting the base unit of a portable communications device is substantially well known in the art. The base unit of a portable telephones is one particular component of a communication device that is specifically well-known in the art to be wall mountable.

To one of ordinary skill in the art at the time the invention was made, it would have been obvious to make the base unit of the invention of 3M in view of Ruppert and Takahashi to be wall mountable, as is well known art. The motivation behind such a modification would have been the space-saving advantages of a unit that mounts to a wall as opposed to one that sits on a shelf, countertop, or other horizontal surface. Telephone connections are also commonly built into the walls of houses and other shelter-type structures, and mounting the base of a communications device on the same or nearby wall would have minimized the amount of wire needed to properly connect the communication device as well as limited the physical exposure of the connection wire. This statement of well-known in the art has been made in previous office action(s). The statement is hereby taken to be admitted prior art because applicant has not

traversed the examiner's assertion of official notice, per MPEP 2144.03.

6. **Claims 33-34 and 36** are rejected under 35 U.S.C. 103 (a) as being unpatentable over 3M in view of Ruppert as applied above, and in further view of Lee et al (USPN 5247380). Hereafter, "Lee et al" will simply be referred to as "Lee".

As detailed above, 3M discloses a headset communication system for a dual lane food service environment, wherein in one mode of operation a user is able to communicate with two lanes from a single headset. Ruppert discloses a communication system comprising a headset and a base station, along with the means to transmit and receive information via both infrared and radio frequency signals. As discussed above, Ruppert discloses that the base station is able to alter the operation settings of the headset. Specifically, the headset of Ruppert can be awakened from a standby mode depending on selected transmission protocols (col. 10, lines 59-61).

While a valid communication link between these two devices is required for the control signal to be sent, 3M in view of Ruppert does not disclose:

the indicating of a ready condition for receiving programming signals through sending an infrared signal from the headset to the programming station

Lee discloses an infrared communications network for ensuring connection and error free transmission between the devices in the

network. As can be seen in Figure 1A, each transmission interface device in the network (24,26,30) includes a transmitter and receiver. Figures 4A-8 illustrate the process flow of the invention. Figure 4C illustrates the manner in which baton packets are transmitted to determine if components are responsive and are thus in service (col. 7, lines 7-27; col. 10, lines 24-48). The affirmative or responsive condition of a transmission interface device reads on "indicating a ready condition for receiving a programming signal of the headset by transmitting an infrared light signal from a headset IR detector emitter to a programming station IR detection emitter".

To one of ordinary skill in the art at the time the invention was made, it would have been obvious to include the handshake protocol for determining the connected devices in the system of Lee into the infrared communications protocols of the invention of 3M in view of Ruppert. The motivation behind such a modification would have been that such a communication procedure would have enabled the base station broadcasting to determine if the infrared link has a status of ready or down/out-of-service as well as adapt to frequent changes in this status, as is taught by Lee. The teachings of Lee also enables more than two devices to be connected and configured in the same system.

Regarding **Claim 34**, the condition of a node in the teachings of Lee as being responsive to a baton packet involves the nodes being 'on' in some manner. Ruppert discloses that the base station includes the ability to awake the headset from a standby condition in response

to a transmission (col. 10, lines 59-61). The positive application of battery power to a transceiver and corresponding signal processing circuitry in a node device such as a headset, corresponds to a such an "on" condition and is inherently required for the above responses to occur. Such a property reads on, "the step of indicating a ready condition further comprises turning the headset on". It is further noted that 3M teaches the step of turning a headset "ON" as preceding the result of completed headset programming (page 23).

Regarding **Claim 36**, please refer above to the rejection of the similar limitations of Claim 24 regarding the "emitter" and Claim 33 regarding the transmission of a "ready signal".

(10) Response to Argument

I. *Summary of Rejection*

The rejections in the present application were each made under 35 U.S.C. 103(a). Not withstanding the other basic criteria, the application of references under this statute sets the bar for the prior art references, or references when combined, at teaching or at least suggesting all the claim limitations, per the third criteria of MPEP 2143.

As shown in the rejection above, the primary reference of 3M generally discloses all features of the claimed invention, except for an IR interface between the headset and base station, wherein this IR interface, as part of the base station, is configured to transmit operation frequency information to the headset. 3M does, however,

teach and disclose as desirable the transmission of such information, though the manner or mode of this transmission through the use of a wired programming cable, which must be connected to both of the base station and headset as part of the channel changing/programming process (steps 4,5; page 23). Ruppert, however, discloses an IR interface between a base station and headset for transmitting data or information to the headset, wherin, as in 3M, these two devices also comprise a separate RF interface. The general ability to transmit information of Ruppert in view of the specific information transmitted in 3M at least suggests the transmission of the specific data of 3M by the particular transmission means of Ruppert. Ruppert particularly provides motivation for incorporating this IR interface into the system of 3M, as well as transmitting the operation frequency information of 3M through such transmission means and mode. As is further discussed below, 3M also provides motivation for transmitting operation frequency information through such transmission means/mode, so far as it was desirable in the original disclosure of 3M.

II. *Summary of the Applicant's Remarks*

The applicant's remarks have been reviewed but have previously - and remain presently - unpersuasive. The position argued by the applicant first fails to consider the rejection of the independent claims, such as Claim 23 as a whole. The remarks further fail to address or even acknowledge all motivation statements present in the final office action. The applicant's remarks also further fail to

fully acknowledge or appreciate the motivation for transmitting operation frequency information that was initially present in the primary reference of 3M.

The propriety of the final rejection, as set forth above, will be further demonstrated below with specific responses to the applicant's specific arguments. Such responses will also demonstrate and substantiate why the arguments of counsel are ineffective in establishing that an examiner has not properly the required burden or has otherwise erred in the positions taken with respect to the references.

III. *Specific Responses to the Applicant's Remarks*

On page 11, lines 28-30, the apt has stated, "However, Ruppert does not include any teaching that an IR communication from the base unit 70 can contain the operation frequency for the transmitter and the receiver for transmission to the telephone headset's IR interface 89". The examiner respectfully disagrees, noting that the conditional indication in the above allegation is "can". The system of Ruppert clearly "can" contain the operation frequency by virtue of suggestion. The wired connection of 3M, as acknowledged by the applicant in the appeal brief (page 11, lines 20-23), allows the headset to be programmed to the same channel as the base station. Since the device is a radio frequency communications device (pages iii or 1 or top of page 22 of 3M), such 'channels' correspond to operation frequencies.

The teachings of 3M further teach that such operation frequencies are in the 900 MHz band at least by virtue of the fact that other 900 MHz devices may cause interference (page 21). To select one of these frequency bands of channels for operation, the wire between the headset and base station must be connected or plugged into both devices, according to the instructions given in 3M (page 23 of 3M, plugging in steps 4 and 5 precede the indication of completed programming in step 6). The implication behind such an order of operations is that the operation frequency or channel for the headset is indicated to the headset by the base station through a signal passed by the involved programming cable. That is, information or data concerning the operation frequency or channel is passed from the base station, which has the channel selection or setting in step 3, to the headset, which indicates and is "now programmed to the same channel as the base station" at or after step 6, through the wire "programming cable", which is connected to both devices in steps 4 and 5 (pages 22-23 of 3M). The reference to the 'missing pin' in the caption of Figure 22 suggests that there are non-missing pins, which in turn suggests that this transfer of information or data between the base station and head set is electrical, since 'pins' are traditionally electrical conductors. Regardless, the implication of this wired connection is that information specific to the operation frequency or channel is passed from the base station to the headset in the system of 3M. Similarly, information is passed from the base station to the headset via the IR port of Ruppert (col. 6, lines 63-

66). So far as the operation frequency or channel is part of the information passed between the base station and headset in 3M, this teaching of Ruppert meets the requirements of the applicant's allegation above; namely, the IR communication of Ruppert can contain the operation frequency or channel for the headset so far as the operation frequency or channel is a specific form of such data generally noted by Ruppert. This discussion of what 3M in view of Ruppert is considered to teach, as well as how it was presented in the Final Office Action, is also applicable to the applicant's allegation on page 12, lines 25-28, so far as the Ruppert can contain the operation channel or frequency for the headset of 3M.

On page 12, lines 1-11, the applicant has noted the proposed combination as well as two of the motivation statements provided in the Final Office Action. However, the examiner respectfully notes that this summary by the applicant presents a selective and ultimately incomplete portrayal of the motivation to combine the references in the Final Office Action. The Final Office Action also stated, "Ruppert also notes an IR transmission scheme that would have enabled secure transmissions to be made" and "Ruppert also teaches that a single base station may issue broadcast communications over the I/R band, which suggests that implementing such interface on the base unit and headsets of 3M would have enabled multiple headsets to access transmitted data". Both of these motivations are derived from the teachings of Ruppert (col. 10, lines 49-63). Both of these statements also provide motivation for including an IR interface/communication

between the base station and headset of 3M as well as transmit the specific data of 3M via such an interface, as is further discussed below.

On page 12, lines 12-16, the apt has stated, "However, this argument ignores that two significant modifications to the 3M Model C960 are required before it meets the limitations of claim 23. First, an IR port would need to be added. Second, the base station would need to be configured to send a signal via the infrared port containing the operation frequency. The Final Office Action discusses the first modification but not the second". The examiner respectfully disagrees. The rejection of this particular limitation, (b-iii of Claim 23) specifically equates the programming jack of 3M to the IR emitter of Ruppert (bottom, page 6, Final Office Action), which was earlier associated with the sending of the operation frequency in the system of 3M (page 4, top, Final Office Action). The reference to the programming jack of 3M during the discussion of the IR port provides direct evidence that the IR port was considered analogous and thus was understood to at least suggest performing the same operation of function of the programming jack in 3M, else it would not have been noted "in view of" said "programming jack of 3M". The proposed modification of "includ[ing] the IR interface of Ruppert into the headset of the applicant's admitted prior art" of 3M was thus made in view of this noted relationship between the programming jack and the IR port. As such, the implementation of the IR port to perform the function of the programming jack, which would require the necessary

'configuration', was an included part of this proposed modification. Again, to conclude or infer otherwise would obviate the noting of the relationship on page 6 of the Final Office Action. Accordingly, the applicant's allegation on page 12, lines 12-16 fails to consider the rejection of this particular limitation as a whole, as it was presented in the Final Office Action. The same limitations were clearly addressed in regards to both the Thus, the Final Office Action discusses both of the applicant's alleged "two significant modifications".

It is further noted that this allegation by the applicant fails to appreciate the relative details of the system of 3M and Ruppert made in the initial discussion of 3M and Ruppert above - the transmission of specific information (operation frequency or channel) in 3M versus the transmission of information or data noted in the system of Ruppert. Incorporating the latter, as was specifically noted in the modification statement of the Final Office Action, necessarily implies at least the inclusion or 'configuration' of the transmitting capability for the former (again, since it is effectively a subset of the overall capabilities suggested for the IR port). Including "additional, frequency independent wireless communication", as noted on page 7 of the Final Office Action, for the system of 3M would necessarily be for the transmission of operation channel or frequency information, since no other, non-radio information is communicated in the primary reference of 3M. To allege that the inclusion of an IR port for 'general communication' as presented by

the applicant, is effectively arguing that the Final Office Action is, at best, actively applying a useless (or at least non-utilized) component. Such a premise would clearly preclude the application of Ruppert altogether, since it would have no clear purpose in the system of 3M. Clearly, however, Ruppert was relied upon in the Final Office Action. Again, such a premise also runs contrary to the association between the programming jack and the IR port in the Final Office Action, as noted above. While the capability for the IR communication in the system of Ruppert may be 'general', the combination of such a capability into or with the teachings of 3M would at least be for the purpose of additional, frequency independent wireless communication of the operation channel or frequency information.

On page 12, lines 17-22, the applicant has stated, "In the Response to the Final Office Action, it was pointed out that there was no motivation provided for this second modification" and "The Advisory Action elaborated on the rejection, but did not state a motivation for the second modification, stating that the claim limitation is 'at least considered obvious in view of the data transmitted in the system of 3M and the manner of the data transmission in the system of Ruppert'". Though an explicit motivation for this characterized 'second modification' is discussed more completely below, the examiner respectfully maintains this position noted in the Advisory Action. Adding a different 'manner' of data transmission does not change, obviate, or otherwise interfere with the type of data originally or desirably transmitted in the primary reference. In the Final Office

Action, the base station of 3M was noted as transmitting the operation frequency to the headset (page 4, top paragraph). This transmission of the operation frequency or channel information, which is selected at the base station by the user (step 2, page 22) for the purpose of changing operation channels for the headset (step 6, page 23, and the paragraph that follows), is clearly disclosed as desirable for at least situations of encountered interfere (page 21, bottom half). Ruppert discloses a system for enabling the transmission of serial data, and thus information, from the base station to the headset (col. 6, lines 63-66). The applicant has acknowledged and appears to agree that 3M in view of Ruppert provides suggestion and motivation to incorporate the IR interface and involved IR ports into the respective base station and headsets of 3M ("The Final Office Action discusses the first modification" and "The argued combination of 3M Model C960 and Ruppert takes one step toward the limitations of claim 23", wherein this step is the "IR port would need to be added", page 12, lines 12-16 and 25-26; see also the applicant's remarks in the After Final Response, page 5, lines 11-12, " The asserted motivation may provide reasons for adding general I/R communication capabilities to a headset"). The examiner agrees. With such a resulting combination, as suggested by the collective teachings of 3M in view of Ruppert, the motivation to configure this base station with IR port to "output a signal to the programming unit infrared light emitter containing the operation frequency for the transmitter and the receiver for transmission by the programming unit infrared light emitter to the

headset infrared light detector" remains the *same* as it was in the primary reference - to enable the changing of channels if interference is encountered, as part of the process discussed on pages 21-23 of 3M. Again, the addition of a different *manner* for data or information transmission into 3M does not render non-obvious or undesirable the transmission of specific data (such as the operation frequency information), including through the use of the added manner (IR) of transmission, which is disclosed for the system of Ruppert. The system of 3M, with regards to the transmission of non-IR information between the base station and the headset, includes a "what" (operation frequency), a "why" (interference encountered), and a "how" (programming cable). The reference of Ruppert discloses a different form of "how" (IR interface) as well as some advantages to the use of this particular form of "how" (it is 'frequency independent and wireless', it can be 'multi-device compatible', it can be made 'secure', and can 'simultaneously transmit' or 'broadcast' information to multiple headsets from a single base station). Each of these advantages or benefits are disclosed in the teachings of Ruppert (col. 7, lines 13-16; col. 10, lines 49-63) and noted in the motivation statements of the Final Office Action (page 7). This useful or even advantageous "how", as applied to the system of 3M, does not otherwise preclude, inhibit, or render undesirable, the 'what' and the 'why' of 3M. The 'why' of 3M alone remains the same as the 'why' in the system of 3M in view of Ruppert. The advantages or benefits of the "how" in the system of Ruppert apply to the 'what' and 'why' of 3M, just as

they do to the 'what' and 'why' in Ruppert. Again, modifying the IR port of the base station of 3M in view of Ruppert remains desirable for the same reasons as such an information transmission was desirable in the original teachings of 3M - to change channels or operating frequencies in an attempt to overcome or eliminate interference.

The applicant appears to be, in effect, arguing that 'explicit motivation' must be provided for a latent or at least implicit property or capability of the system of 3M in view of Ruppert. MPEP 2145 states that "[m]ere recognition of latent properties in the prior art does not render nonobvious an otherwise known invention". It is respectfully submitted that such recognition of a latent or implicit property does not require a special motivation as well. So far as the IR interface of Ruppert would be configured to transmit data upon inclusion in the base station and headset of 3M, the transmission of specific operation frequency data therethrough would have become a latent or implicit property thereof.

On page 12, lines 23-24, the applicant has stated, "Applicants respectfully submit that the rejection of claim 23 must be withdrawn because no motivation is provided for this second modification". The examiner respectfully disagrees. First, please refer to the above paragraphs, noting that motivation for such an arrangement remains the same as it was for the other form of data or information transmission in the system of 3M, even if a different manner for such a transmission of information is disclosed by Ruppert. Second, please refer to the entire listing of motivation for adding such an IR port

to the headset and base station of 3M in view of Ruppert, as it was presented in the Final Office Action (page 7). At least four different benefits or sources of motivation were provided in the Final Office Action, though only two are reprinted or highlighted in the appeal brief as filed by the applicant. While all are applicable to the transmission (and configuration of the base station of 3M for said transmission) of IR data, and thus applicable to the transmission of the specific data or information of Ruppert, the fourth one listed is particularly applicable to the transmission of operation frequency or channel information to this characterized 'second modification'.

The fourth motivation statement was "Ruppert also teaches that a single base station may issue broadcast communications over the I/R band, which suggests that implementing such interface on the base unit and headsets of 3M would have enabled multiple headsets to access transmitted data". Restated, the IR form of interface enables multiple headsets to receive a single transmission of information. Please compare this with step 7 of the re-programming procedure of 3M, page 23. When the programming of a single headset is completed, the process must be repeated for each of the headsets, including steps 4-6, which implicate the transmission of data or information from the base station to the headset. Thus, the transmission of data or information from the base station to the headset (steps 4-6) must be repeated for each headset. The 'broadcast' capability of Ruppert's IR interface, however, enables simultaneous transmission of data or information from the base station to multiple headsets. Thus,

transmitting the operation frequency with the IR interface of Ruppert would have obviated the repeated transmission of such information as is otherwise performed in the system of 3M, using only the transmission manner of 3M. This modification of transmitting operation channel or frequency information via the IR interface would have at least obviated portions of the process of repeating steps 4-6 for multiple headsets, including steps such as plugging in the programming cable. Such a simultaneous transmission scheme in 3M would have potentially eliminated the need to repeat steps 4-7 (or those analogous thereto), if not the repetition of steps 1-3 as well. Elimination of repetition would have been motivation alone for this 'second modification', so far it would have involved the omission of an element (repetition of transmitting steps) with retention of the element's function (transmitting the operation frequency to multiple headsets as part of a programming procedure). So far as the transmission process as well as the plugging in of the cable both take a user's time and effort, the implication of the simultaneous transmission of the operating frequency information by the IR interface of Ruppert would have been that user effort, if not time as well, in repeating the same transmission, would have been spared. Accordingly, the Final Office Action did provide motivation particularly applicable for this second modification.

It is further noted herein that the 'secure' nature of such an IR transmission, as noted by Ruppert and in the third motivation statement of the Final Office Action, would have also provided the

benefit of secure information transmission, so far as it would have provided such a benefit - information security - to all data transmitted by such a means, which would have thus included the particular operation frequency or channel data of 3M.

Regarding the applicant's further arguments, it is respectfully submitted that the above two paragraphs are also applicable, as well as contradict, the applicant's remarks presented on page 12, lines 25-30.

On page 13, lines 25-29, the applicant has stated, "Applicants respectfully submit that Dembiczak applied to the present application requires that an explicit motivation be provided for why one of ordinary skill in the art would modify the base station of the 3M Model C960 to transmit a signal containing an operation frequency via an IR signal". The examiner respectfully notes, however, that while the statements of Dembiczak are generally applicable to the present application (as well as the overall patent examining procedure), the specifics of the Dembiczak case preclude a literal application and mandate of analogous results to the present application. The issue in Dembiczak was that the Board failed to provide *any* motivation (rather than the 'explicit' motivation requested by the applicant) for combining the references it showed as able to 'read on the claimed invention' and the Commissioner failed to evidence the alleged level of one of ordinary skill in the art ("Nowhere does the Board particularly identify any suggestion, teaching, or motivation to combine the children's art references (Holiday and Shapiro) with the

conventional trash or lawn bag references" and "To the contrary, the obviousness analysis of the Board's decision is limited to a discussion of the ways that the multiple prior art references can be combined to read on the claimed invention" and "Of course, in order to do so, the Commissioner must do what the Board did not do below: make specific findings of fact regarding the level of skill in the art", as found in sections II-A and II-B of the Dembiczak decision). The present application and rejection thereof involves neither form of shortcoming. As listed above, suggestion or motivation for the transmitting of 'a signal containing an operation frequency via an IR signal' is present in both the references of 3M (pages 21-23, particularly) as well as Ruppert (col. 7, lines 8-21 and col. 10, lines 49-63, particularly). Since the motivation is derived from and based on the direct teachings of the applied prior art, these teachings would appear to be sufficient for one of ordinary skill in the relevant art having the reference before him to make the proposed substitution, combination, or other modification. As such, *prima facie* obviousness has been established by combining or modifying the teachings of the prior art to produce the claimed invention, wherein teachings, suggestions, and motivation to do so were found explicitly and implicitly in the references of 3M and Ruppert themselves. Since the suggestion or motivation was derived from the prior art, it is respectfully submitted that the Final Office Action also makes clear that the rejection does not rest on hindsight.

In the remaining pages of arguments, regarding the other claims (dependent as well as dependent), the applicant notes the rejections thereto, but does not provide an argument different or beyond that which as addressed and refuted in the above response. So far as the arguments presented in this remaining portion of the appeal brief reiterates what is addressed above, the examiner respectfully submits that these arguments in the remainder of section A as well as sections B and C are addressed by the above response, in light of analogous allegations cited above. Thus, it is respectfully submitted that this response to the applicant's remarks is complete, the final result of which being that a case of obviousness has been properly and appropriately established for these claims 24-40 as well.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Andrew Graham

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